

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 09/005,3186
Source: EFW10
Date Processed by STIC: 8-2-05

ENTERED

CRF Errors Edited by the STIC Systems Branch

Serial Number: 09/005,318G

CRF Edit Date: 8/2/05
Edited by: KQI

Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

Corrected the SEQ ID NO. Sequence numbers edited were:

13

Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

Deleted: ___ invalid beginning/end-of-file text ; ___ page numbers

Inserted mandatory headings/numeric identifiers, specifically:

Moved responses to same line as heading/numeric identifier, specifically:

Other: Corrected amino acid
numbering for seq 10 # 113.



IFW16

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/005,318G

DATE: 08/02/2005
TIME: 11:19:27

Input Set : A:\PTO.KD.txt
Output Set: N:\CRF4\08022005\I005318G.raw

3 <110> APPLICANT: HEIN, MICH B.
 4 HIATT, ANDREW C.
 5 FITCHEN, JOHN H.
 7 <120> TITLE OF INVENTION: NOVEL EPITHELIAL TISSUE TARGETING AGENT
 9 <130> FILE REFERENCE: 040989/283662
 11 <140> CURRENT APPLICATION NUMBER: 09/005,318G
 12 <141> CURRENT FILING DATE: 1998-01-09
 14 <150> PRIOR APPLICATION NUMBER: 08/782,481
 15 <151> PRIOR FILING DATE: 1997-01-10
 17 <150> PRIOR APPLICATION NUMBER: 09/005,167
 18 <151> PRIOR FILING DATE: 1998-01-09
 20 <160> NUMBER OF SEQ ID NOS: 140
 22 <170> SOFTWARE: PatentIn Ver. 2.1
 24 <210> SEQ ID NO: 1
 25 <211> LENGTH: 137
 26 <212> TYPE: PRT
 27 <213> ORGANISM: Homo sapiens
 29 <400> SEQUENCE: 1
 30 Gln Glu Asp Glu Arg Ile Val Leu Val Asp Asn Lys Cys Lys Cys Ala
 31 1 5 10 15
 33 Arg Ile Thr Ser Arg Ile Ile Arg Ser Ser Glu Asp Pro Asn Glu Asp
 34 20 25 30
 36 Ile Val Glu Arg Asn Ile Arg Ile Ile Val Pro Leu Asn Asn Arg Glu
 37 35 40 45
 39 Asn Ile Ser Asp Pro Thr Ser Pro Leu Arg Thr Arg Pro Val Tyr His
 40 50 55 60
 42 Leu Ser Asp Leu Cys Lys Lys Cys Asp Pro Thr Glu Val Glu Leu Asp
 43 65 70 75 80
 45 Asn Gln Ile Val Thr Ala Thr Gln Ser Asn Ile Cys Asp Glu Asp Ser
 46 85 90 95
 48 Ala Thr Glu Thr Cys Tyr Thr Tyr Asp Arg Asn Lys Cys Tyr Thr Ala
 49 100 105 110
 51 Val Val Pro Leu Val Tyr Gly Gly Glu Thr Lys Met Val Glu Thr Ala
 52 115 120 125
 54 Leu Thr Pro Asp Ala Cys Tyr Pro Asp
 55 130 135
 58 <210> SEQ ID NO: 2
 59 <211> LENGTH: 135
 60 <212> TYPE: PRT
 61 <213> ORGANISM: Mus sp.
 63 <400> SEQUENCE: 2
 64 Gln Asp Glu Asn Glu Arg Ile Val Val Asp Asn Lys Cys Lys Cys Ala
 65 1 5 10 15

(pg.6)

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/005,318G

DATE: 08/02/2005
TIME: 11:19:27

Input Set : A:\PTO.KD.txt
Output Set: N:\CRF4\08022005\I005318G.raw

67 Arg Ile Thr Ser Arg Ile Ile Pro Ser Ala Glu Asp Pro Ser Gln Asp
68 20 25 30
70 Ile Val Glu Arg Asn Val Arg Ile Ile Val Pro Leu Asn Ser Arg Glu
71 35 40 45
73 Asn Ile Ser Asp Pro Thr Ser Pro Met Arg Thr Lys Pro Val Tyr His
74 50 55 60
76 Leu Ser Asp Leu Cys Lys Lys Cys Asp Thr Thr Glu Val Glu Leu Glu
77 65 70 75 80
79 Asp Gln Val Val Thr Ala Ser Gln Ser Asn Ile Cys Asp Ser Asp Ala
80 85 90 95
82 Glu Thr Cys Tyr Thr Tyr Asp Arg Asn Lys Cys Tyr Thr Asn Arg Val
83 100 105 110
85 Lys Leu Ser Tyr Arg Gly Gln Thr Lys Met Val Glu Thr Ala Leu Thr
86 115 120 125
88 Pro Asp Ser Cys Tyr Pro Asp
89 130 135
92 <210> SEQ ID NO: 3
93 <211> LENGTH: 137
94 <212> TYPE: PRT
95 <213> ORGANISM: Oryctolagus cuniculus
97 <400> SEQUENCE: 3
98 Asp Asp Glu Ala Thr Ile Leu Ala Asp Asn Lys Cys Met Cys Thr Arg
99 1 5 10 15
101 Val Thr Ser Arg Ile Ile Pro Ser Thr Glu Asp Pro Asn Glu Asp Ile
102 20 25 30
104 Val Glu Arg Asn Ile Arg Ile Val Val Pro Leu Asn Asn Arg Glu Asn
105 35 40 45
107 Ile Ser Asp Pro Thr Ser Pro Leu Arg Arg Asn Pro Val Tyr His Leu
108 50 55 60
110 Ser Asp Val Cys Lys Lys Cys Asp Pro Val Glu Val Glu Leu Glu Asp
111 65 70 75 80
113 Gln Val Val Thr Ala Thr Gln Ser Asn Ile Cys Asn Glu Asp Asp Gly
114 85 90 95
116 Val Pro Glu Thr Cys Tyr Met Tyr Asp Arg Asn Lys Cys Tyr Thr Thr
117 100 105 110
119 Met Val Pro Leu Arg Tyr His Gly Glu Thr Lys Met Val Gln Ala Ala
120 115 120 125
122 Leu Thr Pro Asp Ser Cys Tyr Pro Asp
123 130 135
126 <210> SEQ ID NO: 4
127 <211> LENGTH: 136
128 <212> TYPE: PRT
129 <213> ORGANISM: Bos sp.
131 <400> SEQUENCE: 4
132 Glu Asp Glu Ser Thr Val Leu Val Asp Asn Lys Cys Gln Cys Val Arg
133 1 5 10 15
135 Ile Thr Ser Arg Ile Ile Arg Asp Pro Asp Asn Pro Ser Glu Asp Ile
136 20 25 30
138 Val Glu Arg Asn Ile Arg Ile Val Pro Leu Asn Thr Arg Glu Asn

RAW SEQUENCE LISTING DATE: 08/02/2005
 PATENT APPLICATION: US/09/005,318G TIME: 11:19:27

Input Set : A:\PTO.KD.txt
 Output Set: N:\CRF4\08022005\I005318G.raw

```

139      35          40          45
141 Ile Ser Asp Pro Thr Ser Pro Leu Arg Thr Glu Pro Lys Tyr Asn Leu
142      50          55          60
144 Ala Asn Leu Cys Lys Lys Cys Asp Pro Thr Glu Ile Glu Leu Asp Asn
145      65          70          75          80
147 Gln Val Phe Thr Ala Ser Gln Ser Asn Ile Cys Pro Asp Asp Asp Tyr
148          85          90          95
150 Ser Glu Thr Cys Tyr Thr Tyr Asp Arg Asn Lys Cys Tyr Thr Thr Leu
151          100         105         110
154 Val Pro Ile Thr His Arg Gly Val Thr Arg Met Val Lys Ala Thr Leu
155          115         120         125
157 Thr Pro Asp Ser Cys Tyr Pro Asp
158          130         135
161 <210> SEQ ID NO: 5
162 <211> LENGTH: 119
163 <212> TYPE: PRT
164 <213> ORGANISM: Rana sp.
166 <220> FEATURE:
167 <221> NAME/KEY: MOD_RES
168 <222> LOCATION: (47)
169 <223> OTHER INFORMATION: Variable amino acid
171 <220> FEATURE:
172 <221> NAME/KEY: MOD_RES
173 <222> LOCATION: (88)..(89)
174 <223> OTHER INFORMATION: Variable amino acid
176 <220> FEATURE:
177 <221> NAME/KEY: MOD_RES
178 <222> LOCATION: (91)
179 <223> OTHER INFORMATION: Variable amino acid
181 <400> SEQUENCE: 5
182 Glu Gln Glu Tyr Ile Leu Ala Asn Asn Lys Cys Lys Cys Val Lys Ile
183      1          5          10          15
185 Ser Ser Arg Phe Val Pro Ser Thr Glu Arg Pro Gly Glu Glu Ile Leu
186      20          25          30
W--> 188 Glu Arg Asn Ile Gln Ile Thr Ile Pro Thr Ser Ser Arg Met Xaa Ile
189      35          40          45
191 Ser Asp Pro Tyr Ser Pro Leu Arg Thr Gln Pro Val Tyr Asn Leu Trp
192      50          55          60
195 Asp Ile Cys Gln Lys Cys Asp Pro Val Gln Leu Glu Ile Gly Gly Ile
196      65          70          75          80
198 Pro Val Leu Ala Ser Gln Pro Xaa Xaa Ser Xaa Pro Asp Asp Glu Cys
199          85          90          95
201 Tyr Thr Thr Glu Val Asn Phe Lys Lys Lys Val Pro Leu Thr Pro Asp
202          100         105         110
204 Ser Cys Tyr Glu Tyr Ser Glu
205          115
208 <210> SEQ ID NO: 6
209 <211> LENGTH: 128
210 <212> TYPE: PRT

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/005,318G

DATE: 08/02/2005
TIME: 11:19:27

Input Set : A:\PTO.KD.txt
Output Set: N:\CRF4\08022005\I005318G.raw

211 <213> ORGANISM: Lumbricus sp.
 213 <400> SEQUENCE: 6
 214 Asn Lys Cys Met Cys Thr Arg Val Thr Ala Arg Ile Arg Gly Thr Arg
 1 5 10 15
 215 Glu Asp Pro Asn Glu Asp Ile Val Glu Arg Tyr Ile Arg Ile Asn Val
 20 25 30
 217 Pro Leu Lys Asn Arg Gly Asn Ile Ser Asp Pro Thr Ser Pro Leu Arg
 35 40 45
 220 Asn Gln Pro Val Tyr His Leu Ser Pro Ser Cys Lys Lys Cys Asp Pro
 50 55 60
 223 Tyr Glu Asp Gly Val Val Thr Ala Thr Glu Thr Asn Ile Cys Tyr Pro
 65 70 75 80
 226 Asp Gln Gly Val Pro Gln Ser Cys Arg Asp Tyr Cys Pro Glu Leu Asp
 85 90 95
 229 Arg Asn Lys Cys Tyr Thr Val Leu Val Pro Pro Gly Tyr Thr Gly Glu
 100 105 110
 232 Thr Lys Met Val Gln Asn Ala Leu Thr Pro Asp Ala Cys Tyr Pro Asp
 115 120 125
 235 <210> SEQ ID NO: 7
 240 <211> LENGTH: 421
 241 <212> TYPE: DNA
 242 <213> ORGANISM: Homo sapiens
 244 <220> FEATURE:
 245 <221> NAME/KEY: CDS
 246 <222> LOCATION: (1)..(414)
 248 <220> FEATURE:
 249 <221> NAME/KEY: sig_peptide
 250 <222> LOCATION: (1)..(6)
 252 <220> FEATURE:
 253 <221> NAME/KEY: mat_peptide
 254 <222> LOCATION: (7)..(414)
 256 <400> SEQUENCE: 7
 257 gat cag gaa gat gaa cgt att gtt ctg gtt gac aac aag tgc aag tgt 48
 258 Asp Gln Glu Asp Glu Arg Ile Val Leu Val Asp Asn Lys Cys Lys Cys
 -1 1 5 10
 259 gct cgt att act tct aga atc atc cgt agc tca gag gac cca aat gaa 96
 260 Ala Arg Ile Thr Ser Arg Ile Ile Arg Ser Ser Glu Asp Pro Asn Glu
 15 20 25 30
 261 gat ata gtc gaa cgt aac atc cgt atc atc gtc cca ctg aat aac cgg 144
 262 Asp Ile Val Glu Arg Asn Ile Arg Ile Ile Val Pro Leu Asn Asn Arg
 35 40 45
 263 gag aat atc tca gat cct aca agt ccg ttg cgc aca cgc ttc gta tac 192
 264 Glu Asn Ile Ser Asp Pro Thr Ser Pro Leu Arg Thr Arg Phe Val Tyr
 50 55 60
 265 cac ctg tca gat ctg tgt aag aag tgt gat cca aca gag gta gag ctg 240
 266 His Leu Ser Asp Leu Cys Lys Lys Cys Asp Pro Thr Glu Val Glu Leu
 65 70 75
 267 gac aat cag ata gtc act gcg act caa agc aac att tgc gat gag gac 288
 268 Asp Asn Gln Ile Val Thr Ala Thr Gln Ser Asn Ile Cys Asp Glu Asp

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/005,318G

DATE: 08/02/2005
TIME: 11:19:27

Input Set : A:\PTO.KD.txt
Output Set: N:\CRF4\08022005\I005318G.raw

279	80	85	90	
281	agc gct aca gaa acc tgc agc acc tac gat agg aac aaa tgc tac acg			336
282	Ser Ala Thr Glu Thr Cys Ser Thr Tyr Asp Arg Asn Lys Cys Tyr Thr			
283	95	100	105	110
285	gcc gtg gtt ccg ctc gtg tat ggt gga gag aca aaa atg gtg gaa act			384
286	Ala Val Val Pro Leu Val Tyr Gly Gly Glu Thr Lys Met Val Glu Thr			
287	115	120		125
289	gcc ctt acg ccc gat gca tgc tat ccg gac tgaattc			421
290	Ala Leu Thr Pro Asp Ala Cys Tyr Pro Asp			
291	130	135		
295	<210> SEQ ID NO: 8			
296	<211> LENGTH: 215			
297	<212> TYPE: DNA			
298	<213> ORGANISM: Homo sapiens			
300	<220> FEATURE:			
301	<221> NAME/KEY: CDS			
302	<222> LOCATION: (1)..(213)			
304	<400> SEQUENCE: 8			
305	gat cag aag tgc aag tgt gct cgt att act tct aga atc atc cgt agc			48
306	Asp Gln Lys Cys Lys Cys Ala Arg Ile Thr Ser Arg Ile Ile Arg Ser			
307	1	5	10	15
309	tca gag gac cca aat gaa gat ata gtc gaa cgt aac atc cgt atc atc			96
310	Ser Glu Asp Pro Asn Glu Asp Ile Val Glu Arg Asn Ile Arg Ile Ile			
311	20	25	30	
313	gtc cca ctg aat aac cgg gag aat atc tca gat cct aca agt ccg ttg			144
314	Val Pro Leu Asn Asn Arg Glu Asn Ile Ser Asp Pro Thr Ser Pro Leu			
315	35	40	45	
317	cgc aca cgc ttc gta tac cac ctg tca gat ctg tgt aag aag gat gag			192
318	Arg Thr Arg Phe Val Tyr His Leu Ser Asp Leu Cys Lys Lys Asp Glu			
319	50	55	60	
321	gac agc gct aca gaa acc tgc tg			215
322	Asp Ser Ala Thr Glu Thr Cys			
323	65	70		
327	<210> SEQ ID NO: 9			
328	<211> LENGTH: 140			
329	<212> TYPE: DNA			
330	<213> ORGANISM: Homo sapiens			
332	<400> SEQUENCE: 9			
333	ctagaatcat ccgtagctca gaggacccaa atgaagatat agtcgaacgt aacatccgta	60		
334	tcatcgccc actgaataac cgggagaata tctcagatcc tacaagtccg ttgcgcacac	120		
335	gcttcgtata ccacctgtca	140		
338	<210> SEQ ID NO: 10			
339	<211> LENGTH: 31			
340	<212> TYPE: DNA			
342	<213> ORGANISM: Homo sapiens			
344	<400> SEQUENCE: 10			
345	gatcagaagt gcaagtgtgc tcgttattact t			31
348	<210> SEQ ID NO: 11			
349	<211> LENGTH: 44			

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 08/02/2005
PATENT APPLICATION: US/09/005,318G TIME: 11:19:28

Input Set : A:\PTO.KD.txt
Output Set: N:\CRF4\08022005\I005318G.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:5; Xaa Pos. 47,88,89,91
Seq#:118; Xaa Pos. 37,60,62
Seq#:123; Xaa Pos. 37,78,79,81

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/005,318G

DATE: 08/02/2005

TIME: 11:19:28

Input Set : A:\PTO.KD.txt

Output Set: N:\CRF4\08022005\I005318G.raw

L:188 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:32

M:341 Repeated in SeqNo=5

L:1864 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:118 after pos.:32

M:341 Repeated in SeqNo=118

L:1965 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:123 after pos.:32

M:341 Repeated in SeqNo=123

**Raw Sequence Listing before editing,
for reference only**



IFW16

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/005,318G

DATE: 07/29/2005
TIME: 13:31:40

Input Set : A:\283662 FINAL SEQLIST.txt
Output Set: N:\CRF4\07292005\I005318G.raw

3 <110> APPLICANT: HEIN, MICH B.
4 HIATT, ANDREW C.
5 FITCHEN, JOHN H.
7 <120> TITLE OF INVENTION: NOVEL EPITHELIAL TISSUE TARGETING AGENT
9 <130> FILE REFERENCE: 040989/283662
11 <140> CURRENT APPLICATION NUMBER: 09/005,318G
12 <141> CURRENT FILING DATE: 1998-01-09
14 <150> PRIOR APPLICATION NUMBER: 08/782,481
15 <151> PRIOR FILING DATE: 1997-01-10
17 <150> PRIOR APPLICATION NUMBER: 09/005,167
18 <151> PRIOR FILING DATE: 1998-01-09
20 <160> NUMBER OF SEQ ID NOS: 140
22 <170> SOFTWARE: PatentIn Ver. 2.1

Does Not Comply
Corrected Diskette Needed
(Pg. 1-2)

ERRORED SEQUENCES

373 <210> SEQ ID NO: 13
 374 <211> LENGTH: 286
 375 <212> TYPE: DNA
 376 <213> ORGANISM: Homo sapiens
 378 <220> FEATURE:
 379 <221> NAME/KEY: CDS
 380 <222> LOCATION: (1)...(282)
 E--> 382 <400> SEQUENCE: (29) 13
 383 gac aac aag tgc aag tgt gct cgt att act tct aga atc atc cgt agc 48
 384 Asp Asn Lys Cys Lys Cys Ala Arg Ile Thr Ser Arg Ile Ile Arg Ser
 385 1 5 10 15
 387 tca gag gac cca aat gaa gat ata gtc gaa cgt aac atc cgt atc atc 96
 388 Ser Glu Asp Pro Asn Glu Asp Ile Val Glu Arg Asn Ile Arg Ile Ile
 389 20 25 30
 391 gtc cca ctg aat aac cgg gag aat atc tca gat cct aca agt ccg ttg 144
 392 Val Pro Leu Asn Asn Arg Glu Asn Ile Ser Asp Pro Thr Ser Pro Leu
 393 35 40 45
 395 cgc aca cgc ttc gta tac cac ctg tca gat ctg tgt aag aag tgt gat 192
 396 Arg Thr Arg Phe Val Tyr His Leu Ser Asp Leu Cys Lys Lys Cys Asp
 397 50 55 60
 399 cca aca gag gta gag ctg gac aat cag ata gtc act gcg act caa agc 240
 400 Pro Thr Glu Val Glu Leu Asp Asn Gln Ile Val Thr Ala Thr Gln Ser
 401 65 70 75 80
 403 aac att tgc gat gag gac agc gct aca gaa acc tgc tac tga 282
 404 Asn Ile Cys Asp Glu Asp Ser Ala Thr Glu Thr Cys Tyr *
 405 85 90

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/005,318G

DATE: 07/29/2005
TIME: 13:31:41

Input Set : A:\283662 FINAL SEQLIST.txt
Output Set: N:\CRF4\07292005\I005318G.raw

407 attc 286
1770 <210> SEQ ID NO: 113
1771 <211> LENGTH: 9
1772 <212> TYPE: PRT
1773 <213> ORGANISM: Artificial Sequence
1775 <220> FEATURE:
1776 <223> OTHER INFORMATION: Description of Artificial Sequence: Illustrative
1777 peptide
1779 <400> SEQUENCE: 113
1780 Glu Gln Lys Leu Ile Ser Glu Asp Leu
E--> 1781 1 ~~S~~

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/005,318G

DATE: 07/29/2005

TIME: 13:31:42

Input Set : A:\283662 FINAL SEQLIST.txt
Output Set: N:\CRF4\07292005\I005318G.raw

L:188 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:32
M:341 Repeated in SeqNo=5

L:382 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:13 differs:29

L:1781 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:113

L:1864 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:118 after pos.:32

M:341 Repeated in SeqNo=118

L:1965 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:123 after pos.:32

M:341 Repeated in SeqNo=123